

PROCESS AND PROPERTIES INDEX																									
SUBJECTS													SUBJECTS												
CA 11C Pectinolysis by enzymes of microorganisms. S. A. Barinova (Inst. Microbiology, Moscow). <i>Mikrobiologiya</i> 15, 313-18(1946).—Cultures of <i>Aspergillus niger</i> (I), <i>Botrytis cinerea</i> (II), <i>B. felisimus</i> (III), and <i>B. aculeatus</i> (IV) were tested for pectinolytic activity in sterile phosphate-buffered mediums (pH 4.8-5.3) contg. sugar, starch, potato, and nutrient salts. The enzymes of I, II, and III are adapted; their pectinolytic activity is nearly nil after growing on sugar or starch mediums, but very high after growing on pectin mediums. Apple and cotton pectins were used in test cultures. Enzymes of these organisms and also of IV hydrolyze insol. cotton pectin under suitable conditions if first grown on a medium contg. insol. pectin. Tests with IV showed no hydrolysis of sol. beet, apple, and cotton pectins; apparently the attack on insol. cotton pectin is made possible by adsorption of the inhibitor on the cotton surface. Julian F. Smith																									
ASH-31A METALLURGICAL LITERATURE CLASSIFICATION																									

1ST AND 2ND CROPS																										PROCESSING AND PROPERTY DATA																									
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z AA AB AC AD AE AF AG AH AI AJ AK AL AM AN AO AP AQ AR AS AT AU AV AW AX AY AZ BA BB BC BD BE BF BG BH BI BJ BK BL BM BN BO BP BQ BR BS BT BU BV BW BX BY BZ CA CB CC CD CE CF CG CH CI CJ CK CL CM CN CO CP CQ CR CS CT CU CV CW CX CY CZ DA DB DC DE DF DG DH DI DJ DK DL DM DN DO DP DQ DR DS DT DU DV DW DX DY DZ EA EB EC ED EE EF EG EH EI EJ EK EL EM EN EO EP EQ ER ES ET EU EV EW EX EY EZ FA FB FC FD FE FF FG FH FI FJ FK FL FM FN FO FP FQ FR FS FT FU FV FW FX FY FZ GA GB GC GD GE GF GG GH GI GJ GK GL GM GN GO GP GQ GR GS GT GU GV GW GX GY GZ HA HB HC HD HE HF HG HH HI HJ HK HL HM HN HO HP HQ HR HS HT HU HV HW HX HY HZ IA IB IC ID IE IF IG IH II IJ IK IL IM IN IO IP IQ IR IS IT IU IV IW IX IY IZ JA JB JC JD JE JF JG JH JI JJ JK JL JM JN JO JP JQ JR JS JT JU JV JW JX JY JZ KA KB KC KD KE KF KG KH KI KJ KL KM KN KO KP KQ KR KS KT KU KV KW KX KY KZ LA LB LC LD LE LF LG LH LI LJ LK LL LM LN LO LP LQ LR LS LT LU LV LW LX LY LZ MA MB MC MD ME MF MG MH MI MJ MK ML MN MO MP MQ MR MS MT MU MV MW MX MY MZ NA NB NC ND NE NF NG NH NI NJ NK NL NO NP NQ NR NS NT NU NV NW NX NY NZ OA OB OC OD OE OF OG OH OI OJ OK OL OM ON OO OP OQ OR OS OT OU OV OW OX OY OZ PA PB PC PD PE PF PG PH PI PJ PK PL PM PN PO PP PQ PR PS PT PU PV PW PX PY PZ QA QB QC QD QE QF QG QH QI QJ QK QL QM QN QO QP QQ QR QS QT QU QV QW QX QY QZ RA RB RC RD RE RF RG RH RI RJ RK RL RM RN RO RP RQ RR RS RT RU RV RW RX RY RZ SA SB SC SD SE SF SG SH SI SJ SK SL SM SN SO SP SQ SR SS ST SU SV SW SX SY SZ TA TB TC TD TE TF TG TH TI TJ TK TL TM TN TO TP TQ TR TS TT TU TV TW TX TY TZ UA UB UC UD UE UF UG UH UI UJ UK UL UM UN UO UP UQ UR US UT UU UV UW UX UY UZ VA VB VC VD VE VF VG VH VI VJ VK VL VM VN VO VP VQ VR VS VT VU VW VX VY VZ WA WB WC WD WE WF WG WH WI WJ WK WL WM WN WO WP WQ WR WS WT WU WV WW WX WY WZ XA XB XC XD XE XF XG XH XI XJ XK XL XM XN XO XP XQ XR XS XT XU XV XW XX XY XZ YA YB YC YD YE YF YG YH YI YJ YK YL YM YN YO YP YQ YR YS YT YU YV YW YX YY YZ ZA ZB ZC ZD ZE ZF ZG ZH ZI ZJ ZK ZL ZM ZN ZO ZP ZQ ZR ZS ZT ZU ZV ZW ZX ZY ZZ																																																			
<i>CA</i> Influence of potassium and magnesium on growth and acid forming capacity of <i>Rhizopus nigricans</i>. S. A. Rarnova. <i>Mikrobiologiya</i> 17, 10-11, 1948. The yield of fumaric acid (I) in fermenting glucose with black mold (II) is substantially increased by a sharp decrease in K content of the nutrient, e.g. from 26.7% of glucose fermented with K at 180 to 40.2% with K at 9.5 p.p.m. Yield of I dropped to 45.3% when K was further decreased to 0.3 p.p.m. The K deficiency for II was compensated by adding more Na. Lowering Mg content acts similarly, e.g. raising the yield of I from 22% at 32 to 38% at 1 p.p.m. The recommended salt content of mediums for producing I is: $(NH_4)_2SO_4$ 0.3, KH_2PO_4 0.003, NaH_2PO_4 11.0 0.06, $MgSO_4 \cdot 7H_2O$ 0.001, $ZnSO_4 \cdot 7H_2O$ 0.005, $FeCl_3$ 0.001. The yield of lactic acid fluctuates, with no discernible relation to nutrient salt content. Fermentation by II was fastest at glucose concns. of 5-10%. Julian F. Smith <i>Inst. Microbiol - AS USSR</i> ASH ALA RETALLUGRAAL LITERATURE CLASSIFICATION																																																			

Barinova, S.A.

Influence of carbon dioxide on mold growth. S. A. Barinova (Inst. Microbiol., Acad. Sci. U.S.S.R., Moscow). *Tr. Vsesoyuzn. nauch. issled. inst. mikrobiologii*, 22, 391-8 (1953).—Atm. CO₂ stimulates growth of *Aspergillus niger*, *A. flavus*, *Rhizopus nigricans*, and *Penicillium chrysogenum*, even in the first growth stages, especially in respiration and conidial growth. Air enriched to 5% CO₂, flow rate 6000 cc./hr., inhibits *A. niger* but stimulates *A. flavus*. At 0% CO₂ and 1000 cc./hr. *A. flavus* was stimulated (18.2% over ordinary air) at pH 7.4 but inhibited (22% under ordinary air) at pH 5.6. Growth-rate increments ranged from 17.7 to 309% for *A. niger*, pH 4.3-6.8; 68.8-838.5% for *A. flavus*, pH 4.3-6.8; 0.6-21% for *R. nigricans*, pH 0.2; and up to 1405% for *P. chrysogenum*, pH 4.2. Julian P. Smith

Barinova, S. A.

Significance of carbon dioxide in the life processes of molds. I. Possibility of substituting organic acids for carbon dioxide. S. A. Barinova (Inst. Microbiol., Acad. Sci. U.S.S.R., Moscow). *Microbiologiya* 22, 497-503 (1953); cf. C.A. 48, 9470c.—Atm. CO₂ stimulates growth of *Aspergillus niger*, *A. flavus*, and *Rhizopus nigricans* in mediums contg. succinic, malic, aspartic, or citric acids; but these acids are not substitutes for CO₂. The main effect occurs in early growth stages, in respiration, and in conidial growth. Molds do not utilize CO₂ in the synthesis of C₁ and C₂ acids. The mechanism of the growth stimulus has not yet been explained.

Julian F. Smith

Baranova, L.

U S S R .

Effects of carbon dioxide on respiration in molds. S. A. Baranova (Inst. Microbiol., Acad. Sci. U.S.S.R., Moscow). *Mikrobiologiya* 23, 531-6 (1954); cf. *C.A.* 48, 9470c. Tests with *Aspergillus niger*, *A. flavus*, *Penicillium chrysogenum*, and *Rhizopus nigricans* showed that CO₂ stimulates respiration whether the cells are growing or not. Increased in O₂ demand ranged from about 18 to 184% in tests lasting 20-180 min. (Warburg app.). The respiration coeff., CO₂/O₂, was 0.99 to 1.01 on carbohydrates, but dropped to 0.7-0.8 in mediums contg. fats or proteins. Conidia utilized glucose, and mycelia utilized polysaccharides, in respiration. Julia F. Smith

Soyuz Alkayem.
BARINOVA, S.A.

Effect of carbon dioxide on the reduction of methylene blue by mold
fungi [with summary in English]. Mikrobiologiya 27 no.1:3-6 Ja-F
'58. (MIRA 11:4)

1. Institut mikrobiologii AN SSSR, Moskva.
(CARBON DIOXIDE, eff.
on mold reduction of methylene blue (Rus)
(FUNGI, metab.
methylene blue reduction, eff. of carbon dioxide (Rus)

BARINOVA, S.A.

On the tricarboxylic acid cycle in molds. Mikrobiologiya 29
no.1:21-27 Ja-F '60. (MIRA 13:5)

1. Institut mikrobiologii AN SSSR.
(ASPERCILLUS metab.)
(RHIZOPUS metab.)

BARINOVA, S.A.

Stimulation of the growth of molds by carbon dioxide and the effect
of mesotartaric acid on this process. Mikrobiologiya 29 no.2:161-163
Mr-Apr '60. (MIRA 14:7)

1. Institut mikrobiologii AN SSSR.
(ASPERGILLUS) (RHIZOPUS)
(CARBON DIOXIDE—PHYSIOLOGICAL EFFECT)
(TARTARIC ACID—PHYSIOLOGICAL EFFECT)

BARINOVA, S.A.

Hydroxylamine and oximes as a source of nitrogen for *Aspergillus niger*. Mikrobiologiya 29 no.5:635-642 S-0 '60. (MIRA 13:11)

1. Institut mikrobiologii AN SSSR.

(*ASPERGILLUS NIGER*)

(OXIMES)

(HYDROXYLAMINE)

BAITOV, D. A. (U.S.S.R)

"The Consumption of Carbonic Acid by Mould Fungi and its Role in their Metabolism."

Report presented at the 5th International Biochemistry Congress,
Moscow, 13-16 Aug 1961

BARINOVA, S.A:

Significance of carbon dioxide in the biological activity of molds.
Izv. AN SSSR. Ser. biol. no.4:561-573 J1-A: '61. (MIRA 14:9)

1. Institut mikrobiologii AN SSSR.
(MOLDS (BOTANY)) (CARBON DIOXIDE--PHYSIOLOGICAL EFFECT)

BARINOVA, S.A.

Carbonic acid requirement and its role in the metabolism of
mold fungi. Mikrobiologiya 31 no.1:10-17 Ja-F '62. (MIRA 15:3)

1. Institut mikrobiologii AN SSSR.
(CARBONIC ACID) (MOLDS (BOTANY))

BARINOVA, S.A.

C^{14} incorporation into the mycelium of *Aspergillus niger*
cultivated in glucose with N_2 $C^{14}O_2$ Mikrobiologiya 33
no.2:216-220 Nov. 64. (Mikro 17:12)

1. Institut mikrobiologii AN SSSR.

BARINOVA, S.A.

"Active" CO₂ formation in *Aspergillus niger* cultures.
Mikrobiologiya 35 no.3:402-407 1973-74.

(MIRA 18:18)

1. Institut mikrobiologii AN SSSR. Submitted March 28,
1968.

BARINOVA, T.Ya.
BARINOVA, T.Ya.; DZHURAYEV, A.

Propagation of oscillations in elastic, solid, and liquid semispaces
bordering along a plane. Uch. zap. Tadzh. un. 10:80-88 '57.
(Oscillations) (Differential equations, Partial) (MIRA 10:11)

24,4200

S/85961/109/000/003/003
D234/D308

AUTHOR: Barinova, T.Ya.
TITLE: Problem of elastic wave propagation in layer-isotropic elastic media
SOURCE: Akademiya nauk Tadzhikskoy SSR. Trudy. v. 109, 1961. Sbornik statey Tadzhikskogo respublikanskogo matematicheskogo obshchestva, v. 1, 107 - 142

TEXT: The author determines the displacement potentials in an isotropic medium, due to a double force with a moment, using the results of G.I. Petrashen' and I.N. Uspenskiy. The potentials are derived by differentiating those for a tangential force. The auxiliary problem of wave reflection and refraction at the boundary of two media is treated in detail (for the above case of double force) and the results are applied to media consisting of 2, 3 and 4 layers. Extensive tables are given for cases of forces applied at different points. There are 8 tables. √B

Card 1/1

L 63806-65

ACCESSION NR: AR5018979

UR/0169/65/000/007/G020/G020
534.16

SOURCE: Ref. zh. Geofizika, Abs. 7G146

AUTHOR: Barinova, T. Ya.

TITLE: A Lamb problem for a half-space with stress relaxation

CITED SOURCE: Tr. In-t seysmostoyk. str-va i seysmol AN TadzhSSR, v. 12, 1964, 3-30

TOPIC TAGS: real seismic medium, elastic lag environment, Gurevich model, Lamb half-space problem, incomplete variable separation, successive approximation method

TRANSLATION: The experimentally known fact that the damping constant is not dependent on frequency can serve as the basis for selecting a model of a real seismic environment. Such a model, for example, is represented by an elastic lag medium at partial selection of lag center. The author accepted the model of G. I. Gurevich as a concrete realization of an elastic lag environment and solves for that model Lamb's problem for a half-space. The method of incomplete separation of variables, evolved by G. I. Petrashen', is employed in formulating the solution and in its analysis. Final formulas are given for the case of "compact" environments, for which the deviation from Hooke's model is minor.

Card 1/2

L 63806-65

ACCESSION NR: AR5018979

The successive approximation method can be used in the latter case. A model of an ideal elastic medium is accepted as the zero approximation. The formulas obtained for longitudinal, transverse, and Rayleigh waves differ from the corresponding formulas for an elastic medium by the presence of a factor characterizing absorption and by modification of phase values falling under symbols of trigonometric functions. Bibl. with 18 titles. P. Krauklis.

SUB CODE: MA, ES

ENCL: 00

llc
Card 2/2

BARINOVAYEM.

1720. The use of the instrument Ts.I.A.T.I.M.-51-V for the analysis of gaseous hydrocarbons by low-temperature rectification. L. A. Pctolovskii, E. M. Barinova and V. M. Ivanenko. Report of Symposium: Metodys Issledov. Neft. Nefteprodukt. M., Gosoptekhizdat, 1955, 184-194; Ref. Zhur., Khim., 1956, Abstr. No. 36,123.—The instrument developed is an improved modification of the semi-automatic Ts.I.A.T.I.M.-51 for the analysis of gaseous hydrocarbons by rectification at low temp. It preserves the basic constructive advantages over other instruments with similar aims—(a) the collection of fractions in graduated receivers with salt soln. allows them to be easily removed for analysis, since the fractions do not have to be pumped out with a Topley pump as in other types of instrument; (b) the graduated receivers allow an additional measurement (besides the automatically traced diagrams) of the quantity of fractions obtained on distillation, which increases the reliability of the analytical results; (c) mercury is used in the instrument only in manometers, which is a great advantage as compared with other automatic and semi-automatic instruments. C. D. KOPKIN

3/5

18/5

PM

SAMOYLOVICH, D.M.; BARINOVA, Ye.S.

Acidic fixing agents for nuclear emulsions. Prib.i tekhn.eksp.no.3:
46-49 N-D '56. (MLRA 10:2)

(Photography, Particle track)

Barinova, Ye.S.

AUTHORS: Samoylovich, D. M., Barinova, Ye.S., and Martynov, Yu.G. 120-5-6/35

TITLE: Reduction of Distortions in Emulsion Layers During Development and Fixing (Umen'sheniye iskazheniy emul'sionnykh slojev pri fotograficheskoy obrabotke)

PERIODICAL: Pribery i Tekhnika Eksperimenta, 1957, No. 5, pp. 30-35 (USSR)

ABSTRACT: The swelling of nuclear emulsions under different conditions was studied and the results are given for the NIKFI-R emulsions. It was found that in favourable conditions development (including the hot stage) cannot substantially deform the emulsion and that the distortion occurs mainly during fixing and subsequent washing. Curves of swelling versus various physical parameters are given. It is shown that stripped emulsions developed without backing (such as glass) can be used for measuring mean angles due to multiple scattering of protons up to 500 MeV. There are 8 figures, 2 tables and 8 references, 3 of which are Slavic.

SUBMITTED: March, 22, 1957.

AVAILABLE: Library of Congress
Card 1/1

SAMOYLOVICH, D. M., BARINOVA, Ye. S. and PISANKO, I. S.
Sci. Res. Inst. Cinéphotography.

R. "Etude Sur Les Propriétés D'enregistrement des Emulsions Nucleaires de Types'

paper presented at the Second Intl. Colloquium on Corpuscular Photography.
Montreal, 21 Aug - 7 Sep 1958.

Encl: B-3,114,647.

SCV 77-3-4011 (C)

AUTHORS: Samoylovich, D.M.; Belogorodskiy, M.I.; Barinova, Ye.S.

TITLE: Increasing the Sensitivity of Type R Emulsions (Povysheniye chuvstvitel'nosti emul'siy tipa R)

PERIODICAL: Zhurnal nauchnoy i prikladnoy fotografii i kinematografii 1978, Vol 3, Nr 4, pp 284 (USSR)

ABSTRACT: The authors attempt to explain the fact that in type R photographic films treated with triethanolamine, the sensitivity and the fog increase, by postulating a dual mechanism for the triethanolamine. This increases the pH of the solution and at the same time has a reducing effect on the silver halide grains. To test the assumption, type R emulsion from the Zavod tekhnicheskikh plastinok (Industrial Films Plant) of the Mosgorsevnarkhoz was treated with a solution of caustic soda. Fog and sensitivity increased considerably. The centers of sensitivity probably have a selective adsorption with regard to the hydroxyl ions which may lead to the formation of AgOH or other intermediate compounds more easily reducible than silver halide. There are 4 references 3 of which are Soviet and 1 Canadian.

Card 1/2

Increasing the Sensitivity of Type R Emulsions

SCV 77-3-4-17/77

ASSOCIATION: Zavod tekhnicheskikh plastinok (Industrial Films Plant) of
Mosgorsovnarkhoz.

SUBMITTED: March 16, 1958.

1. Photographic emulsions--Sensitivity 2. Photographic emulsions
--Test results 3. Caustic soda--Performance 4. Triethanolamine
--Performance

Card 2/2

SAMOYLOVICH, D.M.; BARINCVA, Ye.S.; VLASOV, A.A.; YUENNOVSKAYA, C.P.

Investigating the sensitivity of emulsion 7 under various
processing conditions. Zhur.nauch.i prikl.fot.i kin. 5
no.1:56-57 Ja-F '60. (MIRA 13:5)

1. Zavod tekhnicheskikh plastinok, Moskva.
(Photographic emulsions--Testing)

SAMOYLOVICH, D.M.; BARINOVA, Ye.S.; VLASOV, A.A.; YUKHNOVSKAYA, O.P.

Increase of the sensitivity and development compensation in type
"R" emulsions in glued condition. Zhur.nauch.i prikl.fot.i kin.
5 no.2:142-143 Mr-Ap '60. (MIRA 14:5)

1. Zavod tekhnicheskikh plastinok, Moskva.
(Photographic emulsions)
(Photography—Developing and developers)

SAMOYLOVICH, D. M., BARINOVA, Ye. S., and ARDASHEV (fnu)

"On the possibility of change of sensitivity of nuclear emulsion during irradiation"

Fourth International Colloquium on Photography (Corpuscular) - Munich, West Germany, 3-8 Sep 62

BARINOVA, Ye. S., SAMOYLOVICH, D.M., ARDASHEV (fnu), RYABOV, V.D., and YUKHENOVSKAYA, O.P.

"On the chemical ripening of the R emulsion"

Fourth International Colloquium on Photography (Corpuscular) - Munich, West
Germany, 3-8 Sep 62

BARINOVA, Ye. S., SAMOYLOVICH, D. M., and KALASHNIKOVA, May No V. I. KALASHNIKOVA

"On the structure and size of the sensitivity centers and the development centers of the R emulsion during the controlled disintegration of these centers"

Fourth International Colloquium on Photography (Corpuscular) - Munich, West Germany, 3-8 Sep 62

SAMOYLOVICH, D.M.; BARINOVA, Ye.S.; ARDASHEV, I.V.

Feasibility of altering the sensitivity of an emulsion during
its irradiation. Dokl.AN SSSR 145 no.3:557-559 J1 '62.

(MIRA 15:7)

1. Predstavleno akademikom I.K.Kikoinym.

(Photographic emulsions) (Gamma rays)

SAMOYLOVICH, D.M.; KALASHNIKOVA, V.I.; BARINOVA, Ye.S.

Structure and dimensions of sensitivity centers and centers of
development of highly sensitive type P nuclear emulsions. Dokl.
AN SSSR 145 no.4:778-781 Ag '62. (MIRA 15:7)

1. Predstavleno akademikom I.K.Kikoinym.
(Photographic emulsions)

SAMOYLOVICH, D.M.; ARDASHEV, I.V.; BAKINOVA, Ye.S.; RIABOVA, R.V.;
YUKHNOVSKAYA, O.P.

Investigating the chemical ripening of type R emulsions. Zhur.
nauch. i prikl.fot. i kin. 8 no.5:359-361 S-0 '63.
(MIRA 16:9)

SAMOYLOVICH, D.M.; (PO)SHOV, A.A. LITSOVA, I.S.I.

Comparative hyperacoustic emission of nuclear explosion by seismic
waves and by other methods. Sovieting agents. Zhur. nach. i
prikl. fiz. i khim. 10 no. 2, 67-72, May 1965.

(MIRA 13:5)

SMOLYANIN, D. A.; SMOLYANIN, D. A.; SMOLYANIN, Ye. S.

Stability of the conditions of the reaction of the
trimerization of the monomer. In: Prikl. fiz. i khim. 10 m. 1:10-1:10-1
1983. (1:10-1:10-1)

DEMESHKO, A. (Leningrad); PAVLOV, V.; BARINOVA, Z., inzh.-informer

Technical information should have a scientific basis. Sov.
profsoiuzy 18 no.2:16-18 Ja '62. (MIRA 15:4)

1. Rabotnik otдела tekhnicheskoy informatsii zavoda "Zhal'giris"
Vil'nyus (for Pavlov). 2. Prasavinskiy L'nokombinat, Vologodskaya
oblast' (for Barinova).

(Technological innovations)

KOZLOV, P. (g. Rovno); SOKOLOV, I.; CHERKASOV, N.; YERKIN, M.;
SHCHEGLOV, A., instruktor; BONDAR', N.; MORSHCHIN, G., inzh.
(Kazan'); SOKOLOV, S.; BARINOVA, Z., inzh.

Readers relate, advise and criticize. Sov. profsoiuzy 18 no.18:32-
33 S '62. (MIRA 15:9)

1. Neshtatnyy korrespondent zhurnala "Sovetskiye profsoyuzy" (for Kozlov). 2. Rukovoditel' lektorskoj gruppy oblas'tnogo soveta professional'nykh soyuzov, (for Sokolov). 3. Rabotnik ob'yedineniya "Sel'khoztekhnika", Tlumachskiy rayon, Stanislavskoy obl. (for Cherkasov). 4. Zaveduyushchiy Chelyabinskoy yuridicheskoy konsul'tatsiyey professional'nykh soyuzov (for Yarkin). 5. Rayonnyy komitet professional'nogo soyuza zhelezнодорожников Karagandinskogo otdeleniya Kazakhskoy zheleznoy dorogi (for Shcheglov). 6. Sekretar' postoyanno deystvuyushchego proizvodstvennogo soveshchaniya tsentral'nykh remontnykh masterskikh tresta "Urgazneftestroy", Kiyev (for Bondar'). 7. Zaveduyushchiy neshtatnym otdelom truda i zarabotnoy platy pri Kalininskom oblastnom komitete professional'nogo soyuza rabochikh stroitel'stva i promyshlennosti stroitel'nykh materialov (for Sokolov). 8. Krasavinskiy l'nokombinat, g. Krasavino, Vologodskoy obl. (for Barinova).
(Labor laws and legislation) (Trade unions)
(Russia--industries)

ALEKSANYAN, V.T.; BARINOVA, Z.B.

Some problems of documentation for molecular spectra with the
aid of punched card systems (survey). Zav.lab. 29 no.7:349-356
'63. (MIRA 16:8)
(Punched card systems--Molecular spectra)

BEYLINSON, M.B.; BARINOVA, Z.G., inzh.

Determining the change of speed moment in the "Reper"
autoregulator. Tekst.prom. 22 no.10:37-40 0 '62.

(MIRA 15:11)

1. Starshiy inzh. nauchno-issledovatel'skoy laboratorii
Minskogo kamvol'nogo kombinata (for Beylinson). 2. Nauchno-
issledovatel'skogo laboratoriya Minskogo kamvol'nogo kombinata
(for Barinova).

(Spinning machinery--Testing)

S/048/62/026/010/009/013
B117/B186

AUTHORS: Zhizhin, G. N., Barinova, Z. B., Liberman, A. L.,
Kuznetsova, I. M., and Tyun'kina, N. I.

TITLE: Infrared absorption spectra of cis- and trans-isomers of
1-methyl-2-N-alkyl cyclohexanes

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya,
v. 26, no. 10, 1962, 1263-1266.

TEXT: Infrared absorption spectra of five pairs of cis- and trans-isomers
of the 1-methyl-2-alkyl cyclohexane series having alkyl radicals
(CH_3 , C_2H_5 , C_3H_7 , C_6H_{13} , and C_7H_{15}) were examined and compared with the
corresponding Raman spectra (V. T. Aleksanyan, Kh. Ye. Sterin,
A. L. Liberman, I. M. Kuznetsov, N. I. Tyun'kina, B. A. Kazanskiy,
Sb.: Issledovaniya po eksperimental'noy i teoreticheskoy fizike.
Pamyati akademika G. S. Landsberga (Investigations in the field of
experimental and theoretical physics. In memory of Academician G. S.
Landsberg), p. 43, Izd. AN SSSR, M., 1959). The cis- and trans-isomers
had been synthesized previously (P. A. Bazhulin, S. A. Ukhlin,

Card 1/3

Infrared absorption spectra ...

S/048/62/026/010/009/013
B117/B186

T. F. Bulanova, A. V. Koperina, A. F. Plate, B. A. Kazanskiy, Izv. AN SSSR, Otd. khim. nauk, no. 5, 480 (1940); G. S. Landsberg, B. A. Kazanskiy et al. Opredeleniye individual'nogo uglevodorodnogo sostava benzinov pryamoy gonki kombinirovannym metodom (Determination of the pure hydrocarbon composition of direct distillation gasolines by the combined method), Izd. AN SSSR, M., 1959; A. L. Liberman, N. M. Kuznetsova, N. I. Tyun'kina, B. A. Kazanskiy, Dokl. AN SSSR, 118, 942 (1958)).

At most frequencies the two spectra were identical. The greatest difference was observed with the infrared spectra of cis- and trans-isomers within the range $585-610\text{ cm}^{-1}$, wherein cis-isomers show a band with an absorption maximum of not less than 30-35 % while trans-isomers exhibit no marked bands. The lines in the corresponding range of the Raman spectra are very weak. Further differences: Within the ranges 800-810, 842-853, 972-975, $1155-1157\text{ cm}^{-1}$ cis-isomers exhibit distinctly marked bands with absorption maxima of 60-90%, while the corresponding bands of trans-isomers are either weak or absent. Trans-isomers display intense lines between 865 and 871 cm^{-1} and distinct lines between 1350 and 1357 cm^{-1} on the edge of the very intense 1380 cm^{-1} bands. In the spectra of the trans-isomers, the bands of the cis-isomers ($972-975$ and $1155-1157\text{ cm}^{-1}$) are shifted into the

Card 2/3

Infrared absorption spectra ...

S/048/62/G26/01C/009/013
B117/B186

ranges 965-968 and 1159-1163 ^{cm}⁻¹, respectively. Despite the identity of most of the frequencies, the characteristics of Raman and infrared absorption spectra very rarely coincide, so the two spectra complement one another. There are 1 figure and 1 table.

ASSOCIATION: Komissiya po spektroskopii Akademii nauk SSSR (Commission on Spectroscopy of the Academy of Sciences USSR).
Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences USSR)

Card 3/3

ALEKSANYAN, V.T.; BARINOVA, Z.B.; VLEDUTS, G.E.; SHEVYAKOVA, I.I.

Chemical code for retrieval of spectrochemical information. STI
no.9:17-21 '63. (MIRA 1000)

ALEKSANYAN, V.T.; BARINOVA, Z.B.; ZHIZHIN, G.N.; STERIN, Kh.Ye.;
BELIKOVA, N.A.; PLATE, A.E.

Vibrational spectra of some endo- and exoderivatives of the
series bicyclo(2,2,1)heptane and bicyclo(2,2,1)-2-heptene.
Zhur.strukt.khim. 4 no.1:28-36 Ja-F '63. (MIRA 16:2)

1. Komissiya po spektroskopii AN SSSR i Moskovskiy gosudarstvennyy
universitet imeni M.M. Lomonosova.

(Bicycloheptane--Absorption spectra)

(Norbornene--Absorption spectra)

ALEKSANYAN, V.T.; BARINOVA, Z.B.

Punched cards for the coding of literature on molecular spectroscopy.
Zav.lab. 30 no.3:332-334 '64. (MIRA 17:4)

1. Komissiya po spektroskopii AN SSSR.

L 14118-66 BXT/EWT(d)/EWP(1)
ACC NR: AP6003133

IJP(c) GG/BB

SOURCE CODE: UR/0315/65/000/012/0029/0035

AUTHOR: Barinova, Z. B.

ORG: none

TITLE: Use of slotted punched cards for information search 16C

SOURCE: Nauchno-tekhnicheskaya informatsiya, no. 12, 1965, 29-35

TOPIC TAGS: punched card, information storage and retrieval, coding

ABSTRACT: The slotted punched card normally has a top unperforated portion for entering information in uncoded form (text, graphics, etc.) and a bottom portion with 5, 7, 10, 13, or 15 rows of holes (usually 34 holes per row) for coding. Each hole represents a single descriptor, and a descriptor is coded by cutting a slot up or down, depending on which system is used, from the appropriate hole to the hole in the next row (up or down). Sorting is accomplished by inserting rods through the slots representing the desired descriptors. When the rods are inserted horizontally through a pack of cards, the coded cards drop a short distance below the rest of the cards. The ease of sorting and the high information capacity (330-340 holes,

Card 1/2

UDC: 002.513.5:676.315.2

L 14118-66
ACC NR: AP6003133

with one descriptor per hole) make slotted cards more attractive than edge-punched cards, and slotted cards can hold more uncoded information than internally punched cards. Card handling equipment and some typical cards are described and illustrated. The importance of analyzing statistically and calculating the probabilities of appearance of descriptors in compiling the lists of descriptors and selecting the code is emphasized. Some card files which have been compiled with slotted punched cards are described briefly. Orig. art. has: 7 figures, 1 formula.

SUB CODE: 05/ SUBM DATE: 21Oct65/ ORIG REF: 009/ OTH REF: 013

Card 2/2

BEYLINSON, M.B.; BARINOVA, Z.G., inzh.

Device for the oiling of silver on the Prince-Smith and Stells make machines. Tekst.prom. 23 no.5:83-84 My '63. (MIRA 16:5)

1. Starshiy inzh. nauchno-issledovatel'skoy laboratorii Minskogo kamvol'nogo kombinata (for Beylinson). 2. Nauchno-issledovatel'skaya laboratoriya Minskogo kamvol'nogo kombinata (for Barinova).
(Woolen and worsted manufacture--Equipment and supplies)

PESKOV, V.G., kand.tekhn.nauk; KUZNETSOV, Yu.A., inzh.; BARINOVA, Z.G., inzh.

Machines for clearing fields of stones. Trakt. i sel'khoz mash. 33
no.8:30-32 Ag '63. (MIRA 16:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'skokhozyast-
vennogo mashinostroyeniya.

BEYLINSON, M.B.; BARINOVA, Z.G., inzh.

Use of silicate adhesive emulsion to reduce the breakage
in spinning. Tekst. prom. 24 no.10:78-80 0 '64.

(MIRA 17/12)

1. Starshiy inzh. nauchno-issledovatel'skoy laboratorii
Minskogo kamvol'nogo kombinata (for Beylinson). 2. Nauchno-
issledovatel'skaya laboratoriya Minskogo kamvol'nogo kombinata
(for Barinova).

24 6610

S/020/62/145/003/008/013
B125/5102

AUTHORS: Samoylovich, D. M., Barinova, Ye. S., and Ardashev, I. V.

TITLE: Possibility of changing emulsion sensitivity by irradiation

ABSTRACT: Akademiya nauk SSSR. Doklady, v. 145, no. 3, 1962, 557 - 559

TEXT: The sensitivity of an emulsion can be very strongly affected by irradiation in the presence of free hydrogen ions. 400 μ thick samples of P(R) type emulsion without backing were immersed in solutions of various acids (of pH values from 1 to 5). One hour later they were exposed to γ -rays and neutrons from a Po-Be source, stored for 12 hours at pH 7, and then developed. The density of the proton and electron tracks is constant at pH 3, and depends neither on the kind of acid used nor on the pH value of its solution. Decreasing the pH value from 3 to 2 greatly reduces the density of the tracks, and relativistic particles are not recorded at all. Exposing the same emulsion to 8.6 BeV protons from the Dubna synchrocyclotron and treating it for two hours with sulphuric and nitric acid does not appreciably reduce the density of the tracks of relativistic particles down to pH2. Between pH2 and pH1 the relativistic

Card 1/2

S/O20/62/145/003/008/013
B125/B102

Possibility of changing ...

tracks decrease very rapidly in density and number. The tracks due to
alpha or decay resist treatment of the latent image with acid solutions
of pH1. After irradiating the layer, (third series of experiments), the
density of the recoil proton tracks is unchanged down to pH2 and reduced
by about 10% at pH1. The reversible reduction of sensitivity in the
presence of hydrogen ions depends on the competitive capture of electrons
by H^+ ions and mobile free H^+ ions during the formation of the latent
image. The irreversible reduction of sensitivity depends on the release
of atomic silver in the acids. This irreversible process is infinitesimal
when the emulsion is sensitized with gold. There are 2 figures.

PRESENTED: February 26, 1962, by I. K. Kikoina, Academician

DISCUSSION: February 10, 1962

Part 2/2

S/020/62/145/004/014/024
3178/3102

AUTHORS: Samoylovich, D. M., Kalashnikova, V. I., and Barinova, Ye. S.

TITLE: Structure and dimensions of the sensitivity centers and development centers of high-sensitivity P (R)-type nuclear emulsions

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 145, no. 4, 1962, 778-781 ✓

TEXT: R-type nuclear emulsions 400 μ thick without backing were studied. The parameter characterizing the effect of dilute acids on the sensitivity and the latent image was the density of the specks in the relativistic particle tracks. The nature of the sensitivity of the emulsion can be inferred from the dependence of the sensitivity on the treatment of the layers. The studies were made with an amidol developer. On treatment with acid of pH 1 the decrease in sensitivity is $\geq 30\%$. The stability of the grain can be explained by assuming that 70 % of the grains form centers when sensitized with gold. These centers are stable to acids. 30 % of the grains have sensitivity centers consisting of silver. The fast particles used were electrons, protons (8.6 Bev), and relativistic muons. The specimens were

Card 1/2

Structure and dimensions of the...

S/020/62/145/004/014/024
B178/5102

treated with acid of $\text{pH} < 7$ and then washed with distilled water. It has been found that the silver of the development centers and of the sensitivity centers begins to dissolve at $\text{pH} 3$. In about $1/3$ of all nuclei the number of silver atoms in the centers of the latent image exceeds only slightly the smallest number necessary for development. 25-30 % of the nuclei have formation centers that cannot be dissolved even in some tens of hours. Probably 10 silver atoms exist per formation center. There are 4 tables.

PRESENTED: February 26, 1962, by I. K. Kikoin, Academician

SUBMITTED: February 10, 1962

Card 1/2

ANANIEV, V.A.; SUBLADEN, A.K.; NARSKI, S.V.; BARIUSKI, I.F.;
KAVERIN, N.V.; EVSTIGNEVA, N.A.

Study of the etiology of Botkin's epidemic hepatitis. Stud.
cercet. inframicrobil. 14 no. 3 '63.
(HEPATITIS, INFECTIOUS) (HEPATITIS VIRUSES)

NAKHRADYAN, A.A., inzh.; BARINSKIY, B.D.

Utilizing the possibilities for curtailing idle time of railroad cars. Zhel. dor. transp. 40 no. 7:72 J1 '58. (MIRA 11:7)

1. Nachal'nik stantsii Bessarabskaya (for Nakhradyan). 2. Zamestitel' nachal'nika stantsii Bessarabskaya (for Barinskiy).
(Railroads--Management)

BARINSKIY, F.G.

*DECEASED **

All-institute conferences and sessions of the learned council of the
Gamaleia Institute of Epidemiology and Microbiology in 1959. Zhur.
mikrobiol. epid. i immun. 31 no.7:156-157 J1 '60. (MIRA 13:9)
(MOSCOW--EPIDEMIOLOGY)

gamaleia institute of epidemiology and microbiology

BARINSKIY, I.F.

Preliminary data on the detection of the complete antigen in the complement fixation reaction between adenoviruses and the viruses of infectious hepatitis in dogs. Vop.virus 7 no.4:47-49 J1-Ag '62.
(MIRA 15:8)

1. Institut virusologii imeni D.I.Ivanovskogo AMN SSSR, Moskva.
(COMPLEMENT FIXATION) (HEPATITIS, INFECTIOUS)
(ADENOVIRUS INFECTIONS)

ANAN'YEV, V.A.; BARINSKIY, I.F.; TRACHEV, P.G.; KALINAIKHOV, Ye.P.;
MAZARISTAN, Ye.L.

Evaluation of some diagnostic tests in Botkin's disease. Zhur.
mikrobiol., epid. i immun. 33 no.3:36-39 Mr '62. (MIRA 1:2)

1. Iz Instituta virusologii AN SSSR, kafedry infektsionnykh bolezney
TSentral'nogo instituta usovershenstvovaniya vrachey i Krasnoyarskoy
infektsionnoy bol'nitsy.

(HEPATITIS, INFECTIOUS) (ENTEROCYT S)

BARINSKIY, I.F.

Detection of an antigen common to adenoviruses and viruses of canine infectious hepatitis. Report no.2: Examination of the serums of patients with epidemic hepatitis in the gel precipitation reaction with adenovirus antigen and the antigen of canine infectious hepatitis virus. Vop. virus. 8 no.1: 80-82 Ja-F'63. (MIRA 16:6)

1. Institut virusologii imeni P.I.Ivanovskogo AN SSSR, Moskva.
(HEPATITIS, INFECTION)
(ANTIGENS AND ANTIBODIES--ANALYSIS) (ADENOVIRUSES)

ANAN'YEV, V.A.; KAVERIN, N.V.; NARSKIY, S.V.; BARINSKIY, I.F.

Characteristics of the virus isolated from feces of a patient
with epidemic hepatitis (strain K3). Vop. virus 8 no.2:217-221
Mr-Ap'63 (MIRA 16:12)

1. Institut virusologii imeni D.I.Ivanovskogo AMN SSSR, Moskva

BARINSKIY, I. P., SEMENOVAYEVA, M. M., TASHKOVA, I. YU.

The 15th Scientific Session of the P. I. Ivanovskii Institute
of Virology of the Academy of Medical Sciences of the U.S.S.R.,
dedicated to the problem of infectious hepatitis. (Sov. Arkh.
35 no. 4:114-117 My 1967. (SIRA 24:12)

ANAN'YEV, V.A.; SHUBLADCE, A.K.; NABEKIN, S.V.; BELINSKIY I.F.; KAYEIN, N.V.;
YEVOTIGNEYEVA, N.A.

Study of the etiology of Botkin's epidemic hepatitis. Vop.med.
virus. no.9:3-8 '64. (MIRA 18:4)

PARINSKIY, I.P. (Moskva)

Serological reactions in Botkin's epidemic hepatitis. Vop.med.
virus. no.9:59-64 '64. (MIRA 18:4)

L 6800-65 EWT(1)/EWA(b) Pa-4 JK
ACCESSION NR: AP4039589

S/0016/64/000/006/0120/0125

AUTHOR: Barinskiy, I. F.; Anan'yev, V. A.; Sinayko, G. A.

TITLE: Serological investigation of virus strains isolated from epidemic hepatitis patients

SOURCE: Zhurnal mikrobiologii, epidemiologii i immunobiologii, no. 6, 1964, 120-125

TOPIC TAGS: hepatitis (Botkin's disease), isolated hepatitis virus strain, virus strains K₃ and 158-kr, serological investigation, serum neutralization reaction, complement fixation reaction, virus neutralizing antibody, virus specificity, hepatitis convalescence period, serum titration

ABSTRACT: Twelve virus strains were isolated from the blood and feces of epidemic hepatitis patients and an immune serum was developed for each strain by immunizing rats with virus suspensions. The neutralization and complement fixation reactions of the 12 serums showed that 10 of the 12 virus strains were similar in biological and antigenic properties. Two of these similar virus strains (K₃ and

Card 1/3

L 6800-65

ACCESSION NR: AP4039589

158-Kr) were used for seroreaction investigations of serums prepared from epidemic hepatitis patients in different convalescent stages. For complement fixation reactions, the serums were diluted with five parts of a physiological solution (pH 7.0) and heated at 60°C for 30 min. For neutralization reactions, serums were taken from patients with serious hepatitis cases (aldolase level of 30 to 40 units or more, transaminase level of 100 units or more, clinical symptoms and enzyme levels not restored by 4th to 5th week of jaundice) and from patients with light hepatitis cases (aldolase level of less than 30 units, transaminase level of less than 100 units, clinical symptoms and enzyme levels restored by 4th to 5th week of jaundice). Findings show that the titers of virus neutralizing and complement fixing antibodies are low in sera of patients with epidemic hepatitis. Antibodies for the investigated virus strains were generally found in the sera of patients during the fourth month of convalescence or later. Virus neutralizing antibodies were found more often in sera of patients with serious hepatitis cases. In many cases, antibodies for the virus strains under investigation were also found in donor sera and sera from patients with different acute infectious diseases. Experimental results demonstrate the feasibility of investigating

Card 2/3

L 6800-65

ACCESSION NR: AP4039589

virus specificity by serological reactions and the need for
developing virus research in this direction. Orig. art. has: 7
tables.

ASSOCIATION: Institut virusologii im. Ivanskogo AMN SSSR (Virusology
Institute AMN SSSR)

SUBMITTED: 02Aug62

ENCL: 00

SUB CODE: LS

NR REF SOV: 002

OTHER: 001

Card 3/3

BARINSKIY, I.P.; KAVERIN, N.V.

Study of the nature of a factor responsible for the sensitivity of cells to a virus isolated from hepatitis patients. Vop. virus. 9 no.1:102-103
Mr-Apr '64. (MIRA 17:10)

1. Institut virusologii imeni Ivanovskogo ANU SSSR, Moscow.

BARINSKIY, I.F.

Mechanism of the reaction of agglutination of chicken erythrocytes
with the serum of Botkin's epidemic hepatitis patients. Zhur.
mikrobiol., epid. i immun. Akad. 1959 72 141.

(MIRA 18/2)

L. Institute virological. Imen. Ilyashkevich AMN USSR, Moscow.

BARINSKIY, I.F.; ANAN'YEV, V.A.; SINAYKO, G.A.

Serological study of virus strains isolated from patients with
Botkin's epidemic hepatitis. Zhur. mikrobiol.: epid. i immun.
41 no.6:120-125 Je '64. (MIRA 18:1)

1. Institut virusologii imeni Ivanovskogo AN SSSR.

KARNAUKHOV, Ye.F.; BARINSKIY, I.F.; MEL'NIK, Ye.G.

Diagnostic importance of intracutaneous tests with antoserum in
Botkin's disease. Vop.med.virus. no.9:90-94 '64.

(MIRA 18:4)

BARINSKIY, I.F.; BOLOTOVSKIY, V.M.; ANAN'YEV, V.A.

Transfer of infection in mouse hepatitis. Vop. virus. 10 no.:
79-83 Ja-F '65. (MIRA 18:5)

1. Institut virusologii imeni Ivanovskogo AMN SSSR, Moskva.

SEYMENACE, A.K.; PARINSKY, I.E.; BAKHOMOV, P.E.; AND TAT, V.A.;
VANA, A.I.

Use of comparative virology in the study of virus diseases.
Report No. 1. Study of virus diseases in animals in the organs of
experimentally infected animals. Vop. virus. 10 no. 4-5: 165-168. 1965.
(NRA 16:5)

1. General virological knowledge. Report No. 1. E. Kozlov.

SHUBLADZE, A.K.; ANAN'YEV, V.A.; NARSKIY, S.V.; BARINSKIY, N.F.;
KAVERIN, N.V.; YEVSTIGNEYEVA, N.A.

Some results of studying virus strains isolated from epi-
demic hepatitis patients. Vest. AMN SSSR 18 no.6:49-55 '63.
(MIRA 17:1)

BARINSKIY, R. ' 1

48/49T104

48/49T104

PA 48/49T104

USSR/Physics
X-Ray Spectra

"Fine Structure of an Unbroken X-Ray Spectrum,"
R. Barinskiy, 4 pp

"Uspekhi Fiz Nauk" Vol XXXVI, No 1, 1948

Summarizes present knowledge on subject,
primarily from foreign sources. Only Soviet
source is Kostarev, whose articles have appeared
in several issues of "Zhurnal Eksperimental'noy
i Teoreticheskoy Fiziki." Describes a method
48/49T104

USSR/Physics (Contd)

Sep 48

claimed to be more reliable than the "isochromate"
method.

BARTENKIN, R. L. (Translated by) and BORODKIN, I. B. (Editor)

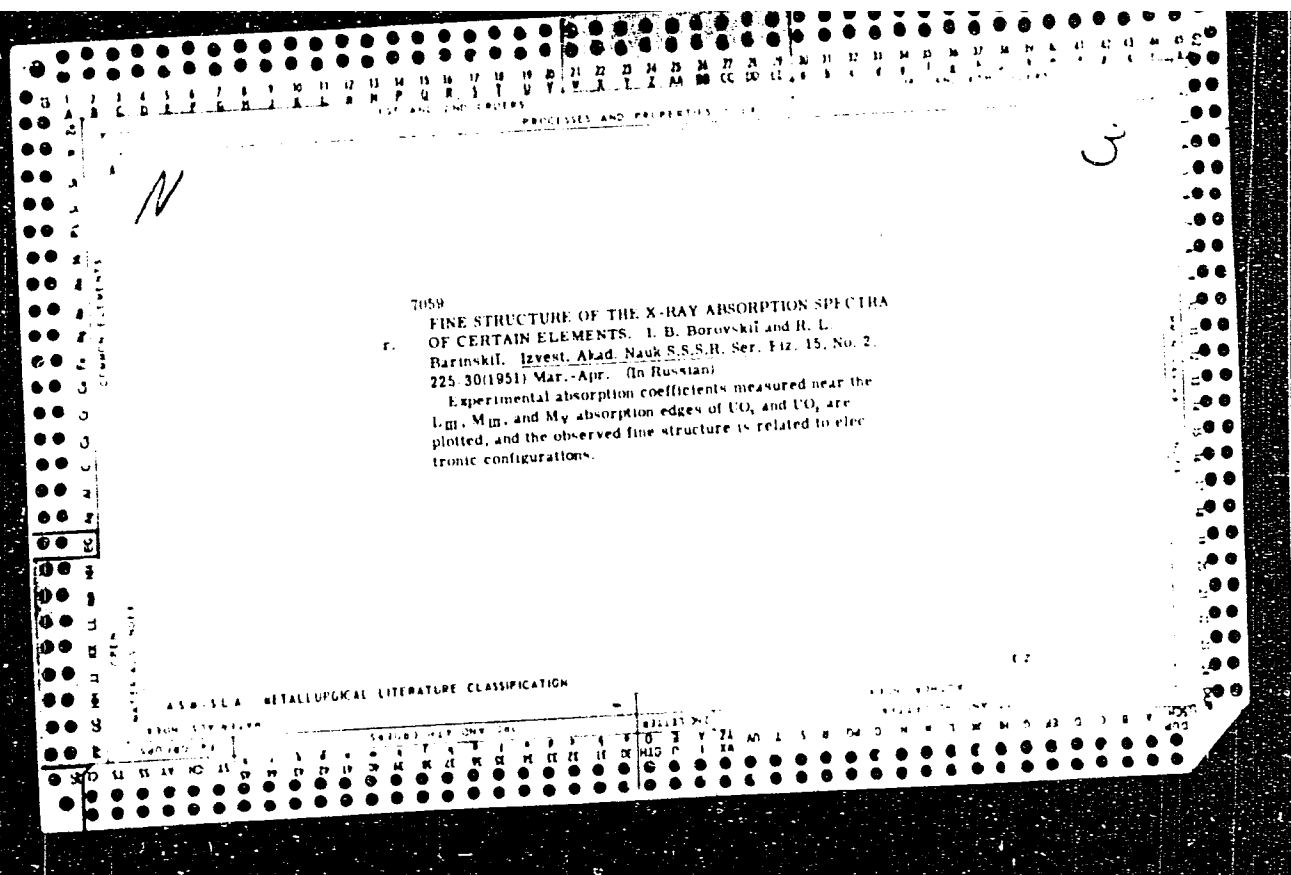
"Investigation of Radioactive Radiations by the Crystal-Diffraction Method: A Symposium of Articles", Moscow: Foreign Literature Publishing House, 1949: 280 pp.

V. KOSHEV, P. A. and SAVINSKIY, E. L.

THE INVESTIGATION OF THE FINE STRUCTURE OF A CAPTION SPECTRA, Izv. Akad. Nauk, SSSR, 72 (No.1) 31-4 (1957) In Russian

Reference is made to a paper by Savinsky (Izv. Akad. Nauk, SSSR, Ser. Fiz., No. 1-3, 1957, 1958) in which the fine structure of the absorption lines of transition elements is attributed to the superposition of the "line" and the continuous absorption processes. Further theoretical results are obtained from the study of the absorption of X-rays in the given substance. The curve for Fe coincides with the theoretical curve, while Ni shows a marked discrepancy, as does also the Ag spectrum. In the final investigation of the L and M series of the absorption and emission spectra of elements having defects in 3d, 4d and 5f levels are considered the elements both qualitatively and quantitatively. V. Isakov

Inst. Gen. Sci., 75 USSR



CA

3

The theory of the principal x-ray absorption edge of atoms in molecules. E. E. Valushtein, R. L. Barinakil, and K. I. Narbut. *Doklady Akad. Nauk* **77**, 1003 (61051). If the first two absorption lines are assumed due to transition of K electrons to the 4p and 5p levels, it can be shown that the quantum defect $\Delta = 1.77$, and the K-4p absorption line is 2.7 e.v. away from the true absorption edge. The formula $T_s = \text{const.} (vq^4/Z^4n^{*4})$, where T_s is the relative intensity of a selective absorption line, n and n^* are the principal and effective quantum numbers of the final state, resp., v is frequency, q is the effective charge of the atom or mol. after ionization and Z is the at. no., gives the intensity ratios 1:0.33:0.15:0.078 for the strongest lines at the K-edge of A. Parratt (*Phys. Rev.* **46**, 843(1934)) found this ratio to be 1:0.31:0.18:0.085. Similar agreement with expt. can be obtained by applying Δ values obtained from Rb and Cs optical spectra to the calcul. of Kr and Xe absorption spectra.

Cyrus Feldman

USSR/Physics - Spectroscopy 1 Jul 51

"Relation Between the Theory of Basic X-ray Absorption Boundary and the Theory of Fine Structure," R. L. Barinskiy, K.I. Marbut, E.Ye Vaynshteyn, Inst of Geol Sci, Acad Sci USSR and Inst of Geochem and Analyt Chem imeni V.I. Vernadskiy, Acad Sci USSR

"Dok Ak Nauk SSSR" Vol LXXIX, No 1, pp 49-52

Authors establish formulas defining lines of selective absorption and real absorption boundary. Comparison of theory and exptl results is possible after elimination from exptl curve of absorption

210780

USSR/Physics - Spectroscopy (Contd) 1 Jul 51

lines and boundary; center of latter should be taken as origin of fluctuations on energy scale. Presented by Acad A. A. Lebedev 30 Apr 51.

BARINSKIY, R. L.

210780

BARINSKIY, R. L.

USSR/Physics - X-Ray Absorption 11 Jul 51
Coefficient

"Magnitude of the Jump in the Coefficient of X-Ray Absorption," E. Ye. Veynshteyn, R. L. Barinskiy, K. I. Marbut. Inst of Geochem and Analyt Chem Imeni Vernadskiy and Inst of Geol Sci, Acad Sci USSR

"Dok Ak Nauk SSSR" Vol LXXIX, No 2, pp 225-228

Study dependence of subject jump on atomic number; jump in the case of krypton; and jump of argon. States that Kramers' theory is not satisfactory for small Z starting at Z=25. State that the agreement

214773

of Jonsson's relation with data of expts is accidental. Knowledge of the effective quantum number n^* is necessary. Submitted 20 Apr 1951 by Acad A. A. Lebedev.

214773

BARILSKII, R. I.

236T87

USSR/Physics - X-Ray Spectroscopy

Nov 52

"Computation of Structure of Basic X-Ray Boundary of Absorption of Atoms and Molecules," E. Ye. Vaynshteyn, R. I. Barilskiy, K. I. Narbut, Inst Geochem and Analytic Chem and Inst of Geolog Sci, Acad Sci USSR

"Zhur Ekspert i Teoret Fiz" Vol 23, No 5, pp 593-608

Describes method of computation of fine structure of basic X-ray boundary of absorption. With help of this method the interpretation of X-ray

236T87

spectra could be made for a number of gaseous mols and simple ions in soln. It enabled establishment of constants of absorbing mols, such as ionization potential, polarizability, etc. Received 21 Mar 52.

236T87

BARINSKIY, R.L.; VAYNSHTEYN, E.Ye.; NARBUTT, K.I.

The structure of the main x-ray absorption edge of transition element atoms
in chemical compounds. Doklady Akad. Nauk S.S.S.R. 82, 355-8 '52.
(CA 47 no.22:11962 '53) (MLR 5:3)

BARINSKIY, R. L.

USSR/Physics - Roentgenography

21 Jan 52

"Utilizing the Jump in the Coefficient of Roentgen Absorption For Calculating the Fine Structure of the Ground Region," R. L. Barinskiy, E. Ye. Vaynshteyn, K. I. Narbutt, Inst of Geol Sci and Inst of Geochem and Analyt Chem imeni V. I. Vernadskiy, Acad Sci USSR

"Dok Ak Nauk SSSR" Vol LXXXII, No 3, pp 354-358

Give the results of calcons of the absorption spectra of germanium comnds GeH_4 , Ge_2H_6 , GeBr_4 , GeCl_4 .
Submitted by Acad A. A. Lebedev 22 Nov 51.

211T98

KARNEY, V. I., LEBELNY, B. I., KURCHENKO, V. M.

Dye-dye analysis

Structure of basic pigments of absorption of light
in solution as determined by X-ray diffraction,
No. 4, 1951. Institut d'Optique, 1951. No. 1
Institut d'Optique, 1951. Institut d'Optique, 1951.
U.S. Government Printing Office, Washington, D.C., 1951.

SO: Monthly List of Russian Accessions, Library of Congress, _____ 1953, Uncl.

USSR/Physics - Transitional Elements 11 Mar 52

"Structure Governing the X-Ray Ground Limit of Absorption of the Transitional Elements When in Chemical Composition," R. L. Barinskiy, E. Ye. Vaynshteyn, K. I. Narbut, Inst of Geol Sci and Inst of Geochem and Analyt Chem Iment Vernadskiy, Acad Sci USSR

"Dok Ak Nauk SSSR" Vol LXXXIII, No 2, pp 199-202

Considers the very important expl facts that confirm the representations, expounded in current article, concerning the nature of the complex structure governing subject absorption in the atoms

214T85

of the transitional elements. Concludes that the X-ray absorption spectra of the atoms in metals and compds are qualitatively very similar, which similarity is so great that it is difficult to admit any great difference in the causes for the appearance of the fine structure in both cases. Submitted by Acad A. F. Ioffe, 11 Jan 52.

BARINSKIY, R. L.

214T85

USSR/Physics - Absorption Spectra, X-Ray 21 Mar 52

"X-Ray Absorption Spectra of Molybdenum in the Compounds $(NH_4)_2MoO_4$, $K_4Mo(CN)_8$, and MoS_2 ," R.L. Barinskii, Inst of Geol Sci, Acad Sci USSR

"Dok Ak Nauk SSSR" Vol 83, No 3, pp 381-384

Expounds exptl material on K and L α -spectra of absorption of Mo in some of its compds. The K-spectra of Mo was investigated in a spectrograph with a curved quartz; reflections were obtained from orientation (1340) with constant $d = 1.17 \text{ \AA}$. Results of the exptl point to the

227T67

strong dependence of the structure of Mo's L α -border (similarly, its free hd-levels) upon the type of compd and valence. Submitted by Acad A.F Ioffe 11 Jan 52.

227T67

BARINSKIY, R.L.

The connection between the principal edge of the x-ray absorption spectrum and the x-ray emission spectra of the atoms in molecules and polar crystals. K. I. Nurbutt, E. E. Vainshteln, and R. L. Barinskiy. *Doklady Akad. Nauk S.S.S.R.* 87, 381-4 (1952); cf. C.A. 46, 2393g; 47, 35cd, 11962a; 49, 1141d, 7424g. —On KCl crystals the agreement between theory and exptl. findings is tested. The theory demands for K a fine structure with two lines 3.4202 and 3.423 A., and one line K_{β} is found with 3.423 A. For Cl the theory demands two emission lines 4.3470 and 4.3788 A., and one finds actually 4.348 (K_{β}) and 4.377 (K_{β}) A. W. I.

(2)

BARINSKII, R. L., ed.

High-energy nuclear reactions Moskva, Izd-vo inostrannoi lit-ry, Upr. nauch. informatsii,
1953- (54-51975)

10794.13

1. Nuclear physics-Collected works.

1. Barinskii, R. L., ed.

RYVKIN, S.M., kandidat fiziko-matematicheskikh nauk; BARINSKIY, R.L., redaktor; KORNILOV, B.I., redaktor.

[The effect of radiation on semiconductors and insulators; a collection of translations] Deistvie izlucheni na poluprovodniki i izolatory; sbornik perevodov. Pod red. S.M. Ryvkina. Moskva, Izd-vo inostrannoi lit-ry, 1954. 279 p. (MLRA 8:5)

(Semiconductors)(Electric insulators and insulation)
(Radiation)

BARINSKIY, R.L.

BARINSKIY, R.L., redaktor; MARGULIS, U.Ya., redaktor; VILLENZVA, A.V.,
tekhnicheskii redaktor

[Nuclear reactions at high energies. Collection of translations]
IAdernye reaktsii pri bol'shikh energiakh. Sbornik perevodov.
Moskva, Izd-vo inostrannoi lit-ry. Pt.2. [Nuclear reactions with
heavy particles] IAdernye reaktsii s tiazhelymi chastitsami. 1954.
290 p. (MLRA 7:9)
(Nuclear reactions)

BARINKNEY, R. L.

Dissertation: "X-Ray Absorption Spectra of Certain Transition Elements." Cand Phys-Math
Sci, Inst of Crystallography, Acad Sci USSR, 16 Jun 54. (Vozhemyakina Moskva, Moscow,
7 Jun 54)

SO: SUN 316, 23 Dec 1954

VAYNSHTEYN, E.Ye.; BARINSKIY, R.L.; NARBUTT, K.I.

Theory of X-ray absorption spectra. (Remarks on A.I. Kostarev's and I.B. Borovskii's article). Zhur. eksp. i teor. fiz. 27 no. 4:521-528
0 '54. (MLRA 7:12)

1. Institut geokimii i analiticheskoy khimii Akademii nauk SSSR.
(Absorption spectra) (X-rays)

VAYNSHTEYN, E.Ye; BARINSKIY, R.L.; NARBUTT, K.I.

Regular patterns in the structure of principal X-ray K absorption limits for atoms in alkali metal halide crystals. Dokl. AN SSSR 105 no.6:1196-1199 D '55. (MLRA 9:4)

1. Institut geokhimii i analiticheskoy khimii i Laboratoriya mineralogii i geokhimii redkikh elementov, Institut geologicheskikh nauk Akademii nauk SSSR. Predstavleno akademikom N.V. Belovym. (Alkali metal halides--Spectra) (X rays)

BARINSKIY, R. L.

4
1
2
3
X-ray spectra and electronic structure of thorium in
thorium nitrate and dioxide. R. L. Barinskiy. *Bull. Acad.
Sci. U.S.S.R., Phys. Ser.* 20, 120-2 (1958) (English transla-
tion).—See C.A. 50, 11809n. B. M. R.

BARINSKIY, R. L.

9704
HOENTGEN SPECTRA AND ELECTRON STRUCTURE OF
Th IN COMBINATION OF $\text{Th}(\text{NO}_3)_4$ AND ThO_2 . R. L.
Barinskiy. (Laboratory of Mineralogy and Geochemistry of
Rare Elements). Izvest. Akad. Nauk S.S.S.R. Ser. Fiz. 20,
193-5(1956) Jan. (In Russian)

Phys
An x-ray spectral method was used in the study of electron
structure of atoms in the solid state. M_{IV} spectra of
absorption and emission of Th of two solid crystal line
compounds of $\text{Th}(\text{NO}_3)_4$ and ThO_2 were investigated. The
work was made on an x-ray spectrograph with a quartz
crystal (constant $d = 3.33 \text{ \AA}$) bent on radius of 500 mm.
The dispersion of the instrument on the wave length of Th
 M_{IV} boundary of absorption was $10 \times E \text{ mm}^{-1} (9 \text{ eV mm}^{-1})$.
Continuous spectra were obtained from an x-ray tube with
tungsten anode of 10kv with current up to 50 ma. Spectra of
Th emission in the compounds were obtained by the method
of initial excitation. Spectra were recorded photographically

on a fine-grained positive film, with exposures from 1.5 to
10hr. A visual microphotometer was used to develop the 5
spectrographs taken for each spectrum. Diagrams of Th
and $\text{Th}(\text{NO}_3)_4$ M_{IV} - and M_V -absorption spectra and the Th

R.L. Baranski

emission lines are given. The studies established a negligible difference in the structures of excited 5f levels of Th in ThO_2 and $\text{Th}(\text{NO}_3)_4$. The strong density of free p π states in the first compound and weakened center of gravity in 5f levels, lead one to assume that the ion-type bond in ThO_2 is weaker than in $\text{Th}(\text{NO}_3)_4$. The type of bond in this group is similar to the "uranyl bond". In every other respect M ν -spectra of $\text{Th}(\text{NO}_3)_4$ and ThO_2 are quite analogous to the spectra of U^{4+} . (R.V.J.)

2/2

AUTHOR: Barinskiy, R.L., Vaynshteyn, E.Ye., Narbutt, K.I. 48-10-4/20

TITLE: The Dependence of X-Ray Spectra of Atomic Absorption in Compounds that have the Character of Chemical Compounds (Zavisimost' rentgenovskikh spektrov pogloshcheniya atomov v soyedineniyakh ot kharaktera khimicheskoy svyazi)

PERIODICAL: Izvestiya Akad.Nauk SSSR, Ser.Fiz., 1957, Vol. 21, Nr 10, pp. 1351-1361 (USSR)

ABSTRACT: In the course of the present theoretical representation the previously (ZhETF, 23, 593, 1952, DAN SSSR, 82, 355, 1952, and 82, 701, 1952) found empirical rules found by the authors can be explained and connected with one another. This applies to the rules governing the structure of atom-absorption-X-ray-edges in multi-atom compounds in which polar connection plays a predominant part. For the case of di-atomic compounds the following may be said:
1.) The extension of the basic absorption line series in the cation spectrum must always be less than that of the satellite series in the same spectrum; with the anion the opposite is the case. 2.) The relative intensity of the satellite series of absorption lines in the cation spectrum must always be greater than the corresponding quantity in the absorption spectrum of the anion in the same compound.

Card 1/2

48-104/20

The Dependence of X-Ray Spectra of Atomic Absorption in Compounds that have the Character of Chemical Compounds

3.) The shape of the selection lines of absorption within the domain of each series in the cation- and anion spectra in compounds with marked ion character of the compound must be near the form of dispersion. With a weakening of the ion character of the connecting forces, the shape of the lines is bound to deviate ever more from the theoretical one. 4.) The reciprocal position of the basic and of the satellite series of the absorption lines is determined by that state which, of the two utmost states in the case of the polarization of the molecule, has the minimum energy. 5.) The anisotropy of the polarizability of multi-atom molecules (e.g. of the halide salts of some metals such as Zn, Ge, etc.) depends upon their structure and therefore (in contrast to diatomic compounds) is in no direct connection with the polarizability of the ions forming the compound. The conclusions drawn here are quantitatively confirmed by the experiments. There are 12 figures and 12 references, 11 of which are Slavic.

ASSOCIATION: IMGRE, GEOKhI. IGEM. AS USSR (IMGRE, GEOKhI. IGEM Akademii nauk SSSR)

AVAILABLE: Library of Congress

Card 2/2

AUTHOR: Barinskiy, R.L.

46-10-8/20

TITLE: K-Spectra of the Absorption of Chlorine in the Chlorides of Alkali Metals (K-spektry pogloshcheniya khloro v khloridakh shchelochnykh metallov)

PERIODICAL: Izvestiya Akad. Nauk SSSR, Ser.Fiz. 1957. Vol. 21, Nr 10, pp. 1381-1386 (USSR)

ABSTRACT: On the strength of the investigations carried out the following may be said: 1.) The K-spectra of the absorption of chlorine in LiCl, NaCl, KCl, RbCl, CsCl compounds were obtained in the reflection of first order on an X-ray spectrograph with a quartz crystal bent according to a radius of 0,5 m. 2.) The experimental curves obtained are shifted in the direction of the longwave side on the occasion of transition from LiCl to CsCl. The fine structure of the spectra also undergoes very considerable changes, but at the first glance these changes do not appear to occur with any essential degree of regularity. 3.) In the compounds mentioned a decomposition of the K-spectra of Cl absorption into a basic and a satellite series of lines and the real edge is carried out. 4.) The correctness of such a decomposition was proved by the example of the

Card 1/3